



Isle of Wight Council
**HEATING & COOLING
POLICY**
October 2015

1 Document Information

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| Title: | Heating and cooling policy 2015 |
| Status: | Live |
| Current Version: | V0.3 (September 2015) |
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| Consultation: | With recognised trade unions |
| Approved by: | Corporate Management team |
| Approval Date: | 12 October 2015 |
| Review Frequency: | Annually |
| Next Review: | September 2016 |

| Version History | | |
|-----------------|---------------------------------|---------------------------------------|
| Version | Date | Description |
| 0.1 | 1 st November 2013 | First draft no consultation |
| 0.2 | 8 th May 2014 | Inclusion of cooling & general update |
| 0.3 | 22 nd September 2015 | Final version |
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3 Introduction

Heating council buildings costs an estimated £230,000¹ per year and is responsible for the generation of approximately 1,720 tonnes of carbon dioxide. This policy aims to reduce wasted energy by way of minimising over heating of buildings, it also serves as a means to ensure compliance with 'The Fuel and Electricity (Heating) (Control)(Amendment) Order 1980 which, although no longer in force, stipulated:

'no person shall use, cause or permit the use of electricity or fuel for the purpose of heating premises so as to cause the temperature of those premises to exceed 19°C which is equivalent to 66.2°F'

The Health and Safety Executive states that 'Individual personal preference makes it difficult to specify a thermal environment which satisfies everyone. For workplaces where the activity is mainly sedentary, for example offices, the temperature should normally be at least 16 degrees.'

National Health Service advice on warm homes suggest that in the winter, vulnerable sedentary people should have their homes heated to a minimum of 18 degrees.

The heating season clearly depends on the external air temperature but generally the Council heating will be turned on in October and switched off in March or April.

Through setting an average maximum heating temperature of 19°C during office based council buildings in winter, it is envisaged that the council will save in excess of £18,000 per year in heating costs. The council's carbon footprint will also be reduced considerably.

The council will adopt this policy from winter 2015 onwards; with a view to reviewing the policy during summer 2016. This will implement the following:

- 1. An average maximum heating limit across office based council buildings of 19°C**
- 2. Ban the use of personal heaters without prior approval obtained by completing the request form at the end of this document.**
- 3. Set a minimum cooling temperature of 24°C during summer for air conditioning units installed in office based council offices.**

There is no upper limit to temperatures within offices but the HSE previously defined thermal comfort in the workplace, as: '*An acceptable zone of thermal comfort for most people in the UK lies roughly between 13°C (56°F) and 30°C (86°F).*

Measures such as fans and natural ventilation are adequate to maintain the upper limit of this temperature range within the UK and consequently much of the mechanical cooling reaching the end of its operational life has been removed rather than replaced. Where mechanical cooling is in place, temperatures should be set at a minimum of 24°C (75°F) degrees for cooling purposes during the summer.

¹ Estimate based on fuel consumption during 2012/13 financial year.

Scope

This policy is applicable to buildings where space heating in particular is required for thermal comfort as opposed to necessity, such as in leisure centres and care homes

Thermal comfort

Thermal comfort is the 'feeling' of whether a person is too hot or too cold.

Thermal comfort is made up of six factors, four of which can be influenced by the building manager such as;

1. Air temperature

Ordinarily measured in degrees Celsius ($^{\circ}\text{C}$) or degrees Fahrenheit ($^{\circ}\text{F}$).

2. Radiant temperature

The best example of radiant heat would be sitting in direct sunlight. While this would 'feel' warm, the air temperature (1) would not correlate with this warmth and may in fact be considerably lower. Many objects within an office environment can radiate heat such as lighting.

3. Air Velocity (draughts)

A small air movement in a cool environment will have a cooling effect, particularly when the moving air is of a lower temperature than skin temperature.

4. Humidity

High humidity levels are more noticeable during summer months when it reduces the body's ability to cool by evaporation of sweat. It does however continue to play a part in thermal comfort during winter, when high humidity levels can make an environment 'feel' cooler.

The remaining two factors influencing thermal comfort are personal factors such as;

5. Clothing insulation

Thinner clothing or items such as short sleeve shirts help keep people cool during hot weather, enabling the body to radiate heat. During cold weather, it is important reduce this cooling effect by wearing additional layers of clothing.

6. Metabolic heat

This relates to the heat that is produced by doing physical work, the more physical work undertaken, the more metabolic heat produced.

Achieving thermal comfort

There is no one size fits all approach to achieving thermal comfort within council buildings, due to personal preferences and varying environmental factors as outlined above.

Through setting the maximum heating temperature at 19°C across all buildings, it is anticipated that other harder to control variables such as humidity (4) and air velocity (3) will be compensated.

Personal factors, particularly clothing insulation (5), should be utilised as far as practical to ensure that personal thermal comfort is achieved. Those occupants feeling cold, must first consider increasing the number of clothing layers worn or the thickness of those layers to improve their clothing insulation, before other measures to improve their thermal comfort will be considered.

A minimum cooling temperature of 24 °C should be set on all sites where air conditioning is available. Elsewhere, natural ventilation and/or desk top fans should be utilised to improve thermal comfort during periods of high temperatures.

Personal electric heaters

Personal electric heaters (or any form of other non-electric heater) are not to be used without prior approval from line managers and will only be made available after completing the application form at the end of this document and having the application approved by the post room. These heaters are considerably more inefficient than the building's central heating system and can adversely affect the temperature in the rest of that building, as well as considerably increasing CO₂ emissions. The majority of council buildings have heating controls, automatically adjusting the amount of heat produced by the boilers in line with the internal temperature of that building. If a personal heater is influencing the temperature 'seen' by these controls, the boilers may assume that the whole building is adequately heated and switch off.

In terms of cost, a typical electric heater could cost some £4.50 per day to run and will contribute some 48kWh² of heat to a room. For the same cost, the buildings central heating would be able to contribute some 140kWh³ of heat, nearly three times more.

To help reduce risk, appliances must comply with the Portable Electrical Equipment Policy and have a valid portable appliance test (PAT). Personal heaters must not be brought in from 'home' to be used in council buildings as this could pose as a significant risk.

Personal electric heaters will be issued by the post room only after all other measures have already been implemented to achieve thermal comfort.

Where a personal heater has been issued, it must be positioned such that it does not create trip hazards from trailing cables or a fire risk by having other material placed on, around or behind it. Placing wet clothes on or in front of the heater is specifically prohibited.

² Assumes 2kW electric heater run for 24 hours a day

³ Assumes 80% efficient boiler running on mains gas

4 Related Documents

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| Corporate Plan | www.iwight.com/council/documents |
| Fuel and Electricity (Heating) (Control) Order 1974/2160 | www.legislation.gov.uk/ukxi/1980/1013/contents/made |
| Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice | www.hse.gov.uk |
| Portable Electrical Equipment Policy | http://wightnet.iow.gov.uk/documentlibrary/view/health-and-safety-manual-2-09-electrical-safety-inspection-testing- |

5 Appendix

Glossary of Terms

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| HSE | Health and Safety Executive |
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PERSONAL HEATER REQUEST FORM

| | |
|---|---|
| Name | |
| Email address | |
| Extension number | |
| location of desk | |
| Temperature (must be below 19°C) | Property services can assist in taking a temperature reading if required. |
| Additional layers of clothing utilised? | Yes / No |
| Medical conditions | |
| Other factors | |
| Date | |
| Signed | |
| Line manager | |
| Line manager (signed) | |
| cost code (£150 / winter or £75 / half winter) | Energy consumed = (1.5kWh x 37.5h x £0.11) £6.19/week |

Please complete all of the above and return to the post room or email it to post.room@iow.gov.uk